Title (en)

Continuous, ultrahigh modulus carbon fiber.

Title (de)

Kontinuierliche Kohlenstoffasern mit sehr hohem Modul.

Title (fr)

Fibres de carbone continues, à haut module.

Publication

**EP 0372931 A2 19900613 (EN)**

Application

**EP 89312718 A 19891206**

Priority

- US 28094288 A 19881207
- US 32440189 A 19890315

Abstract (en)

A high modulus, pitch-based, continuous carbon fiber has a density above about 2.18 g/cc, an electrical resistivity below about 1.6 micro-ohm-meter, and a density greater than 2.18 g/cc. This carbon fiber may be made by a process comprising the steps of: (a) melt-spinning a mesophase pitch having a softening point above about 345<o>C, said melt-spinning being conducted at a temperature above about 395<o>C, to form a plurality of continuous pitch fibers, (b) infusibilizing said pitch fibers by a treatment with aqueous nitric acid; and (c) carbonizing the infusibilized pitch fibers by a thermal treatment conducted in a substantially inert gas atmosphere to a final temperature above about 3000<o>C. After step b) a first heating step in the range of 1000-1600<o>C may be applied. o

IPC 1-7

D01F 9/145

IPC 8 full level

**D01F 9/145** (2006.01)

CPC (source: EP)

**D01F 9/145** (2013.01)

Cited by

US5169616A; EP0629593A3; US7749479B2; US8591859B2; US8734754B2; US8871172B2; US9121112B2; US9340905B2; US9677195B2; US9938643B2; US10151051B2

Designated contracting state (EPC)

BE DE ES FR GB GR IT NL SE

DOCDB simple family (publication)

**EP 0372931 A2 19900613**; **EP 0372931 A3 19911106**; **EP 0372931 B1 19950510**; CA 2004370 A1 19900607; CA 2004370 C 19951121; DE 68922591 D1 19950614; DE 68922591 T2 19950928; HK 1007176 A1 19990401; JP 2769889 B2 19980625; JP H02242919 A 19900927

DOCDB simple family (application)

**EP 89312718 A 19891206**; CA 2004370 A 19891201; DE 68922591 T 19891206; HK 98106400 A 19980624; JP 31551289 A 19891206